DOCUMENT RESUME

ED 400 846 IR 056 161

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TITLE All Alone and Lost in Cyberspace: Closing the Gap between the Local Village and the Global Village through Teaching Namibian Children Information Skills and Technology.
PUB DATE 96
NOTE 9p.; In: Sustaining the Vision. Selected Papers from the Annual Conference of the International Association of School Librarianship (24th, Worcester, England, July 17-21, 1995); see IR 056 149.
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Access to Information; Developing Nations; Elementary Education; Foreign Countries; Futures (of Society); *Information Literacy; Information Technology; *Learning Modules; *School Libraries; Teacher Attitudes; Technological Advancement; *User Needs (Information)
IDENTIFIERS Barriers to Implementation; *Namibia; Teacher Librarians

ABSTRACT

As most of the world progresses towards the twenty-first century, a large sector of the Namibian community struggles with coping with the twentieth century. This paper discusses the vision of educators concerned with school libraries in Namibia to educate the youth of the country to feel at home in a global information society. It is envisaged that these children will act as guides and will take their parents and teachers with them into the "hi-tech" world of the twenty-first century. A new syllabus, the Basic Information Science Syllabus (BIS), was created to enable teachers that do not have adequate information services to teach basic information skills adapted to their own unique situation. The BIS utilizes people and the environment in addition to "traditional" information resources, and all 15 modules make it possible for students to create their own information. An additional module, "The World of Information," addresses the nature of information, where to find information in any circumstances at any time, and uses of information. The paper provides examples of information skills projects and innovations in Namibia. Constraints influencing the success of the teaching module include negative teacher and educator attitudes towards information and the reality and the difficulties of implementing all modules all over the country. Some possible solutions to alleviate the constraints are proposed. An appendix shows the learning aims, basic competencies, and suggestions for the "World of Information" module. (Author/SWC)

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ED 400 846

All Alone and Lost in Cyberspace: Closing the Gap Between the Local Village and the Global Village Through Teaching Namibian Children Information Skills and Technology

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As most of the world progresses towards the 21st century, a large sector of the Namibian community struggles with coping with the 20th century. This paper discusses the vision of educators concerned with school libraries in Namibia to educate the youth of the country to feel at home in a global information society. It is envisaged that these children will act as guides and will take their parents and teachers with them into the "hi-tech" world of the 21st century.

Introduction

The government of Namibia has a vision of creating an education system that would produce confident Namibians, fluent in the national language, able to convert information into practical knowledge, thus upgrading the quality of their day to day existence, not to mention finding employment, which remains a major problem in the country.

This paper discusses a new module added to the Basic Information Science Syllabus (now compulsory in Namibian schools), which aims to link the local village to the global village and produce information literate Namibians.

Background

The gap between the local village in Namibia and the so-called "global village" is quite awesome. The Republic of Namibia is a vast country of 824.00 square kilometers and is the 12th largest country in Africa, with dazzling extremes as far as the climate and landscape are concerned.

The northern part of the country is fortunate enough to border on two great rivers, the Kunene and the Kavango, the only perennial rivers in Namibia. These regions are subtropical, while the rest of the country ranges from semiarid to arid zones.

The majority, 60% (African Development Bank: 1995), of the Namibian population of 1.4 million people, lives in the Northern regions and is part of the two-thirds of the total population who live in rural communities.

With a population density of approximately 1.7 persons per square kilometer, large areas of the country are not populated. Distances between towns are great and only the main routes are tarred. The rail link does not extend to the extreme corners of the country and there is one international airport. The only developed harbor, Walvis Bay, belonged to South Africa until quite recently. A very weak infrastructure regarding postal services, police stations, banking facilities, electricity supply and telecommunications exist in most outlying regions.

The contrast in the development of the different regions is just as extreme. This is the result of a complex preindependence governing system modelled on the apartheid policies of South Africa, which divided the country into eleven ethnic regions. This led to an uneven distribution of resources, most funds being channelled to the areas where the majority of the white population lived. Decentralization as applied through the ethnic authorities did not work at all in Namibia, as it was open to mismanagement and corruption. Of the meager resources that were allocated to the regions, very little reached those for whom it was intended. The long drawn out liberation war was concentrated along the Northern border of the country, resulting in further underdevelopment of this region. Today the government of Namibia finds itself in the unenviable position of trying to eradicate years of neglect and stunted development through the allocation of the necessary resources and services.

IR050161

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The Educational System in Namibia with Particular Reference to School Library Services

For obvious reasons, the educational system is quite imbalanced. Before independence in 1990, the so-called previous "white" schools, numbering 66 (Totemeyer 1990:51), had privileged access to financial resources. The teacher/student ratio (1:25), was very favorable and schools did not lack facilities or equipment. Most schools had a well stocked media center with more than adequate staffing. (Above statements are used in the past tense because since independence, sadly, services in these schools, now open to all races, have deteriorated because resources have to be relocated). In contrast to this situation, facilities in the 1093 schools (Totemeyer 1990:5a) in the other ethnic regions, lacked even such basics as classrooms. In some instances underqualified teachers taught classes of sixty pupils or more, under a tree. The Namibian soil and a branch from the ever-present thorntree served as basic writing aids.

As far as school library services go, the majority of the Namibian students were seldom exposed to any kind of information source, except perhaps a textbook which, in many cases was outdated and unsuitable. Missionaries brought the Bible to villages and to this day this remains the main printed source in many communities.

Five Years of Independence

The first five years of independence have brought some far reaching changes in the educational system of the country. English has been adopted as the only official language and the South African based educational system is being phased out in favor of the International General Certificate of Secondary Education (IGCSE) with examinations being controlled and accredited by the University of Cambridge Local Examinations Syndicate (UCLES). The adoption of English as a medium of teaching throughout the country has posed a major problem for many teachers and students, as English is a second language or even a third or fourth language for the majority of Namibians.

The new educational system is resource-based and relies heavily on the availability of relevant information sources. At a recent seminar in Namibia with the theme "The role of libraries and information services in Education", the Minister of Basic Education and Culture (MBEC), in his opening speech, stated that the new system demands "teachers who are reflective and who have inquiring and analytical minds" to be able to produce students who are "scientific inquirers, critical thinkers, systematic problem solvers, and value-based decision makers".

This is quite a tall order, given the reality of the Namibian situation, especially as regards the availability of information sources and lack of information skills with respect to both teachers and students.

Contrasting Information Literacy Patterns of Namibian Students

There is a marked contrast between the information skills of students living in the urban environment and those living in the rural areas.

A typical example of an advantaged student in an urban environment is that of a Windhoek or Swakopmund primary school pupil (mostly belonging to an affluent minority group and fairly bi- or trilingual), who has a regular information skills time slot in the school timetable, during which Basic Information Science is taught. Well-equipped media centers are found in both centers and in some cases includes computers and a CD-ROM database. There is ample time in the afternoon for visits to the media center and other information services to do assignments. Integration of the school curriculum with resources in the media center comes easily. At home the pupil is exposed to at least five television channels. (This is a very recent development after having had just one official channel for years). A lot of homes have a personal computer, fax machine and a cellular phone. As far as radio is concerned, apart from the various language services, private radio stations are becoming very popular.

On the other hand, a pupil in a village school in the Okavango region, has little chance of being taught the subject Basic Information Science (BIS), which, according to new education policy, is a compulsory subject. Head teachers are faced with a shortage of trained teachers and look upon examination subjects as first priority on the timetable. The result is that teachers who specialized in subject areas other than examination subjects seldom get the chance to teach their own specialization. The University of Namibia, Department of Information Studies, has trained

more than a hundred teacher librarians in the past five years of which only about 10% are utilized as teacher librarians. There is also a lack of appreciation concerning the value of acquiring information skills, as most people in the rural areas have to make do without public information services and have seldom used these. Outdated teaching methods, centered on rote learning and a teacher/ textbook-centered orientation, are firmly entrenched.

The fact that a distressingly small number of schools have a book collection of some sort, aggravates the situation. Totemeyer (1994:6) states that there are less than 200 schools in the country with a book collection of some sort. When pupils in most of the outlying areas of Namibia leave secondary schools to start tertiary training, many of them set foot in a library for the first time and are unable to use information services. When confronted with information technology they are completely lost. It is a familiar sight to see Namibians in front of an automatic teller machine (cashpoint), trying to help each other to operate the machine.

The Basic Information Science Syllabus

Since 1990 a curriculum committee appointed by the MBEC, has been busy preparing a new syllabus which replaces the previously used Book Education syllabus inherited from South Africa. Whereas Book Education was based on teaching children to use traditional libraries and sources, the new syllabus is geared towards the Namibian situation.

The following sources of information are studied in the BIS syllabus:

People, the environment, textbooks, religious books, electronic mass media, newspapers, periodicals, pamphlets/cuttings, fiction, non-fiction, reference books and audiovisual/electronic media.

The first four of these were specifically included for those schools and communities where people, the environment, textbooks and religious books are still the only information sources available. It is also designed to create an awareness of alternative information sources in those users who are in a more privileged position as far as information services are concerned.

The rest of the fifteen modules covers the following themes:

Library orientation, the history of recording and a new module, the world of information.

The BIS syllabus enables teachers in schools that do not have an adequate information service to also teach basic information skills adapted to their own unique situation. It would be absolutely nonsensical to wait for better facilities before starting to equip children with information skills.

A further facet to BIS is that "information generation" plays a major role in the skills taught to pupils.

Each module has a component which makes it possible for pupils to generate their own information, in various formats. (Pamphlets, posters, multimedia projects etc.) These homemade sources can selectively be stored in information services to enhance collections.

The two modules highlighting the environment and people as sources of information, even in the remotest, most desolate part of the country, have been received and implemented with great success.

The natural environment, the village, the town or city, as well as historical and/or cultural sites offer primary information and should be the starting point of any information-seeking exercise. Friends, teachers, leaders and elders, as well as experts in the community, have a wealth of practical knowledge and experience which should be tapped.

Skills taught in these modules include:

* being alert
* observation
* interpretation
* describing observations
* making enquiries
* appropriate communication techniques
* attentive listening
* formulation of questions
* taking notes
* presenting information

The above modules represent the one end of the spectrum as far as information seeking and usage are concerned, namely using what is naturally available. There is yet another perspective that was not addressed in the Book Education syllabus, which is increasingly becoming pertinent. An information revolution is upon Namibians and developments in the past two years in the area of telecommunications and electronic media are overwhelming given the situation at independence only five years ago. Not only did Windhoek and surrounding areas recently receive a cellular telephone network, but more and more exchanges countrywide are being automated and satellite dishes are a familiar sight even in the far north.

Private companies have been using sophisticated information technology for a considerable time.

At the new campus of the University of Namibia (UNAM), students are confronted with some form of information technology in most courses. Computer literacy forms part of the curriculum for quite a few departments. (Curriculum planners at the University would like to see computer literacy as a compulsory part of the new core curriculum, but are hampered because of the lack of adequate facilities and equipment.) Offices are linked to the central computer network with e-mail and on-line access to databases available in the library. Upon arrival students, especially those from the remote regions, find the situation quite overwhelming. However, it is really inspiring to see them eagerly learning new skills and gradually feeling at home in the university community. The Namibian information revolution is spreading fast to other tertiary institutions and government agencies all over the country.

An additional module in the BIS syllabus called "The world of information", has been suggested as being essential to equip Namibian children from primary school level, to become information literate.

At first some resistance was offered by teachers and subject advisors who seemed to want to concentrate only on library skills in the traditional sense. They felt that the concepts related to the information phenomenon, the information society and information technology, were too complex for school children, especially at the primary level. The acute shortage of traditional information sources (books, journals, etc.) and even bare necessities such as electricity in some parts of the country seemed to indicate that such a module would be premature.

However, since this module was suggested in 1994, teachers have seen the information age unfolding and primary school children are taking adults by the hand to lead them into the world of information.

The Teaching Module: "The World of Information" (Appendix 1)

The primary school committee felt strongly that this module should be taught last in their syllabus as module 15. The rationale behind this was that only after children were introduced to all kinds of traditional information sources would it be appropriate to consolidate the pupil's knowledge by introducing them to the wider world of information. The curriculum group working on the secondary syllabus felt, however, that this module should be the starting point.

Be that as it may, learning contents of the module, adaptable according to the level of the pupils, are as follows:

* an understanding of all concepts regarding information and information technology;
* being introduced and able to use the full spectrum of available information sources and information technology as part of an integrated approach to information;
* an appreciation of the value of information in the context of the information age as a necessity to develop intellectually, socially, politically and economically and to make informed decisions;
* experiencing information as a power to change their perception of themselves as well as the world around them.

Themes included in this module are:

* The nature of information;
* Where to find information in any circumstance and at any time;
* Uses of information.

Constraint number two is the reality of the situation that the type of service needed to bring all modules of the BIS into play, is just not feasible for the country in the short term, and might never be possible. The Namibian population growth is set to double within the next thirty years. The number of schools are increasing rapidly. Library and information services at these schools are no where near catching up on the historical backlog and services for new schools are few and far between.

Possible Solutions to Alleviate Constraints

The new Namibian education system can serve as a powerful lever, in that school library services managers could use this to stress that the success of the new IGCSE programs are very much dependant on well-equipped modern, media centers being accessible to all pupils in the country and that teaching of a BIS syllabus, which is not only relevant to the situation in the country, but also takes notice of global trends concerning information and information technology, is crucial to support the ideal of a resource based approach.

The recently developed network of "Teacher Resource Centers" across the country can be used in part to solve the problem. These centers are established in all parts of the country and plans for the further development of mobile units are well advanced. Information collections in these centers are computerized. CD-ROM could be acquired for each center, as well as examples of information technology components which teachers would need to illustrate facets of the module. When the mobile units are in operation, information technology should form an integral part of what is taken to the remote areas. The book box concept could be expanded to include practical examples of information technology.

The University of Namibia library has been appointed as a partner in an exciting "African Development Bank" (ADB) project called the "Human Resources Development Project", which envisages a so-called Information and Instructional Resource Center (IIRC), accommodating existing and new instructional materials with the emphasis on textbooks, instructional manuals and modules and applied research publications. The project also includes a training component which will address the strategy of management and utilization of IIRC resources and the instructional and information technology system it provides, through the training of trainers and users (African Development Bank:1995). The various target groups of users of such a facility places a high priority on teachers, especially in the rural areas. Eventually the benefits they derive from being exposed to the resources in the IIRC in Windhoek through sophisticated information technology in their immediate vicinity, will filter through to the pupils they teach in schools, thus drawing both teachers and pupils into the global information society.

The BIS syllabus forms an integral part of the training of school librarians at the University of Namibia. Second year students are now also trained in database development, and part of their practical sessions every week are spent on hands-on data input.

In the rural areas of the country there are agencies busy setting up teaching aid programs which will combine telecommunications and satellite technology. A private company working in conjunction with a European donor agency, has set up a pilot project in one of the most deprived areas of Namibia, the Rundu region in the far north. They foresee a television/computer linkage to a regional education center for all schools in the region by the end of 1995.

Conclusion

Neill (1985:61) argues for a dual purpose educators should consider when planning syllabi to teach pupils information skills. In an age of what she calls "information overload" she stresses the need for basic community information centers to sort out the information needed for everyday activities of life.

On the other hand, the child of the nineties needs to be armed with skills to ward off the "bombardment of bits and bytes" and to make sense of a world clouded by "disconnected data".

Dianne Lewis (1994:2) puts it differently, "In embracing the concept of the information superhighway, schools need to be sure that they do not get stuck on an on ramp to nowhere."

The essence and maybe the uniqueness of the BIS syllabus is that it makes it possible for pupils in extremely information-deprived areas to be taught information skills using what is available locally, but, on the other hand, the new module in BIS provides the opportunity to bring them into the fast growing Namibian information society. By creating an awareness of the

The syllabus has been provided with a variety of suggestions and methodologies to apply the themes practically.

Practical Case Study

There has been a mixed reception by teachers concerning this module. It was quite evident that they themselves felt uneasy with the concept of information as an object of study. Many are ill-at-ease with information technology. However, some very inspiring results have been reported. At a primary school in Windhoek, a very enterprising young teacher librarian, Ms. Isabel Goosen, tackled the module with her pupils from grades 3 to 7. By dramatizing stories about a person not taking notice of road signs, thus having an accident; or a cook who does not read the instructions on a box of cake mix, and bakes a horrendous cake; and about a mother disregarding the leaflet included in a box of pills and makes her young patient worse instead of better, younger grades were introduced to the concept that information is ever present and should be taken notice of.

The youngsters had a good time dramatizing their own lifelike situations e.g. a sign which is often seen in Namibia near some watertaps- "Water not fit for human consumption" being disregarded by the one pupil with dire consequences!

Other examples thought up by these youngster were taking notice of medic alert bracelets and how to use public telephones by reading the instructions. One group made a cardboard automatic teller machine (cash point) complete with a person punching away at the keys totally oblivious of the instructions, thus losing his card to the machine.

Grade 5 had to research a commodity in their homes like toys or appliances and establish where it was manufactured. They then presented their information in a graph form and had to ponder on the significance of their findings i.e. the relation of quality and price to country of origin?

The higher grades (6/7), were given themes like "Awareness of the environment" or "public Health". They had to critically analyze labels on products to establish whether products that they bought were in fact environmentally friendly or included unhealthy substances. Pupils reported back on a variety of labelling leading to a lively discussion about forming pressure groups to fight artificial flavoring in foods, to make sure if a product is really "dolphin friendly", etc.

The situation at the school, as far as a school library or media center was concerned, was less than ideal when Ms. Goosen arrived there. She started a fund-raising campaign and her pupils participated in the annual reading marathon, organized by the Namibian Children's Book Forum. Money collected through this was used to enlarge her storeroom/classroom space, put in a new carpet, shelving and cupboards. Her most exciting acquisition is a computer with a printer and CD-ROM. Her pupils love searching for information, being so fast on the uptake that she now learns from them.

The teachers at the school are also discovering the value of CD-ROM searches. A music lesson was transformed into a musical trip around the world with the help of the multimedia CD-ROM music database. Another application was overcoming the language problem of both teachers and pupils with the "Bookshelf" database where the spelling and pronunciation of difficult words are seen and heard.

Constraints Influencing the Success of Teaching the Module

The very first stumbling block which would have to be overcome, is that of the attitude of teachers and educators towards information and information technology. The value of information must be illustrated in a practical and proactive way.

The situation at the Suiderhof Primary School where Ms. Goosen teaches could have been very different. When she arrived three years ago she was initially not allowed to take part in the readathon. Her enthusiasm and exciting ideas such as a fancy dress competition, using favorite characters from the books pupils were to read in the readathon, persuaded the head teacher to make it an annual event. Initially she also had to teach some other subjects. All this have changed and she now only teaches BIS and have one day set aside to do administrative tasks in the library. She still has to do sport in the afternoons but a competent pupil library "brigade" manages the school library in the afternoons.

information phenomenon and familiarity for information technology, they will no longer be left all alone and lost in cyberspace, but will be able to bridge the gap between local villages and the global village.

Appendix 1

THEME	LEARNING AIMS THE WORLD OF INFORMATION	BASIC COMPETENCIES
	Pupils will...	Pupils will be able to:
The nature of information	* discover the meaning of information concepts such as: DATA KNOWLEDGE COMMUNICATION MESSAGES MEDIUM OR RECORD DATA BASE ON LINE MICROFORMS MAGNETIC TAPES/DISKS COMPACT DISKS	* understand the various concepts regarding information; * relate information concepts to the daily use of information where
to find information	* develop a positive attitude to the use of various information sources on a day to day basis; * recognize various information sources; * appreciate the importance of using as many information sources as possible.	* gather information from a comprehensive range of information sources; * understand that information sources must be used as an integrated whole in order to find all available information for specific topic.
Uses of information	* discover the value of information in order to develop intellectually, socially, politically and economically and to make informed decisions; * experience information as a power to change their perception of themselves as well as the world around them.	* be able to handle the vast amount of information that should be available to them; * recognize the usefulness of information in their daily lives, as well as in the context of studying, doing projects and research.

SUGGESTIONS FOR LESSONS/METHODOLOGIES: MODULE 1.

The world of information.

Select some of these ideas, add your own and adjust the level according to the needs of your pupils and facilities available in your vicinity.

1. Pupils gather data on given themes, which could be chosen in collaboration with subject teachers. By preparing a presentation either orally or in written form they practice converting raw data into meaningful information and eventually knowledge. The difference between concepts such as data, information and knowledge can thus be demonstrated.

2. To understand concepts such as "database" and "on-line", pupils get the assignment to

   a) Become familiar with databases used in the school to manage marks and report cards.
   b) Visit agencies using computerized databases e.g. banks and travel agents.
   c) Visit a computerized library in the vicinity and do information searches.

3. Examples of microforms, magnetic tapes/disks and CD disks are demonstrated in class by pupils and/or teachers.

4. Visits to information services in the vicinity that makes use of various forms of information technology i.e. Namibian Broadcasting Corporation.

5. In cooperation with a subject teacher, different groups of pupils get different assignments using as many information formats as possible ranging from printed sources to magnetic tapes and CD disks.

6. Pupils establish the unique information needs of different groups of people, e.g. farmers, students, teachers, parents, consumers, unemployed persons, workers, businessmen, journalists, researchers, doctors and suggest possible information sources to satisfy these needs. This exercise will demonstrate the importance of the utilization of information to solve a variety or problems.

The above suggestions should provide opportunities to practice and reinforce the basic skills of observation, interpretation, description, note-taking and presentation which is fundamental throughout this syllabus.